Misdiagnosed Bipolar Disorder Reveals Itself to be Posttraumatic Stress Disorder with Comorbid Pseudotumor Cerebri—A Case Report

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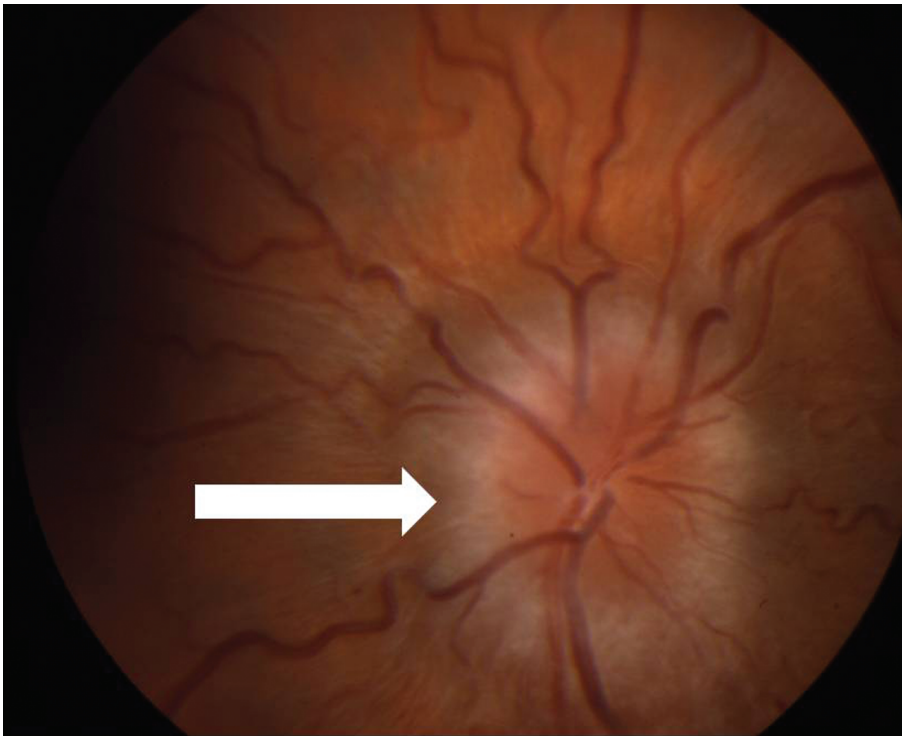
ABSTRACT

We present the case of a patient with a reported history of bipolar II and borderline personality disorders who presented to our inpatient psychiatry department following a suicidal gesture. We determined that she was not suffering from bipolar disorder at all, and we diagnosed her with posttraumatic stress disorder and pseudotumor cerebri. This paper describes the overlap of symptoms of bipolar disorder and posttraumatic stress disorder, which may lead to an incorrect diagnosis. Additionally, the patient had the complicating factor of comorbid pseudotumor cerebri, which we feel contributed to her psychiatric symptoms. Once the patient was properly diagnosed and placed on appropriate treatment, she responded well.



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CASE PRESENTATION

A 29-year-old woman presented to our facility for her fifth psychiatric hospitalization in two years for a reported suicide attempt involving taking 600mg of lithium and 200mg of ziprasidone. She had a two-year history of previous self harm, including overdoses and self mutilation by cutting and burning. She was recently medically discharged from the military and had diagnoses of bipolar II disorder and borderline personality disorder. Prior to her series of psychiatric admissions, the patient was relatively healthy and her only hospitalization was for late-term preeclampsia that resolved after cesarean section without complications. Her medical history was also significant for obesity, migraine headaches, hearing loss secondary to trauma, eczema, asthma, herniated L5-S1 discs, and a

five pack-year smoking history. The patient's history included verbal, physical, and sexual abuse as a child, an engine explosion on a ship that resulted in hearing loss, and radiation exposure that led to respiratory problems. Her medications on admission were telmisartan 40mg, albuterol 90mcg (inhaled as needed), fluocinonide 0.05% ointment daily, tramadol 50mg daily, montelukast 10mg daily, loratadine 10mg, and buproprion and ziprasidone at unknown doses. She was previously treated for bipolar II disorder with numerous psychotropic medications, including quetiapine 1000mg daily, trazodone 50mg daily, risperdone 4mg daily, and lamotrigine, citalopram, lithium, and clonazepam at unknown doses; she remained refractory to all treatment to date. The patient reported 10 to 12 hypomanic episodes per year since their onset two years prior to this admission. During these episodes she described symptoms as irritable mood, decreased need for sleep, increased goal-directed activity, racing thoughts, psychomotor agitation, thrill-seeking behavior, and hypervigilance. These episodes lasted for 2 to 14 days at a time. Her review of systems revealed headaches that were increasingly worse for the past two years. She characterized the pain as ranging from pressure to throbbing, localized between the eyes, and associated with visual acuity changes. The headaches varied in duration but were present every day with fluctuating intensity. Additionally, she complained of rhinorrhea, hirsutism, galactorrhea, breast enlargement, lower back pain, menorraghia, and nasal congestion with no noted relief from loratadine. The patient stated that she had previously been tested for polycystic ovarian syndrome but the test results were negative. Her physical exam was notable for substantial bilateral peripheral vision loss. The patient's baseline mental status exam displayed a linear and logical thought process; dysphoric mood with blunted affect; and poor judgment, insight, self preservation, and impulse control with regard to her recurrent self harm. Thought content was consistent with a sense of foreshortened future and a belief that her husband and two children would be better off without her. She reported depressive symptoms related to financial difficulties and expressed a feeling of helplessness that she could not help support her family. During this and previous admissions, she reported complex visual and auditory hallucinations that varied and included pink animals, smoke, and people and voices telling her to harm herself.

The treatment team was concerned about the constellation of symptoms, most notably her peripheral vision loss and endocrine symptoms, and with pituitary adenoma leading in the differential diagnoses, the team ordered a magnetic resonance imaging scan (MRI) with a dedicated sella turcica view. The MRI showed a partially empty sella (Figure 1), and the radiologist suggested further workup to rule out pseudotumor cerebri (idiopathic intracranial hypertension), which is occasionally present in this finding. The neurology team was consulted and they performed a lumbar puncture. Opening pressure was measured to be 410mm (normal: 50–200mm), and approximately 39mL of cerebrospinal fluid was drained for diagnostic and therapeutic purposes. After the procedure, the patient stated it was the first time in years she did not have a headache, and her affect markedly brightened. The ophthalmology team was also consulted and their baseline exam revealed papilledema and lateral visual field defects (Figure 2). The neurology team started the patient on acetazolamide and topiramate and eventually titrated to daily doses of 2000mg and 200mg, respectively, since her discharge. A nutritionist counseled the patient on the importance of weight loss and worked with her to develop an appropriate weight loss plan.

During the course of her inpatient stay, it became evident that the patient might be suffering from posttraumatic stress disorder (PTSD). Her prevailing psychiatric symptoms after the alleviation of her intracranial pressure were recurrent distressing dreams of abuse and traumatic events, avoidance of places that reminded her of the abuse, feeling detached from others, hypervigilance, and increased irritability. Because the patient revealed a history of physical, verbal, and sexual abuse as a child, she was given a PTSD Checklist-Civilian Version (PCL-C),[1] on which she scored an 83, with the range of 17 to 85 rating the severity of characteristic PTSD symptoms. This confirmed our suspicions.

DISCUSSION

Pseudotumor cerebri (idiopathic intracranial hypertension), while loosely associated with various medications and medical conditions, most often develops in young, obese women with an unknown etiology.[2] It occurs in 1 in 100,000 women, with more than 90 percent of patients being obese with a mean age of 30 at diagnosis.[3] There is some evidence that traumatic injury, radiation exposure, and childbearing may be risk factors.[4] The most common presenting symptoms are daily headaches that are slowly progressive in severity, transient visual loss, peripheral vision loss, diplopia, and tinnitus. In the case presented in this article, we propose that the increased intracranial pressure and constant and worsening headaches may have contributed to our patient's manifestation of psychiatric symptoms. Her brightened affect after the lumbar puncture, which relieved her chronic headache, supports this theory.

This patient's case demonstrates the importance of performing a complete physical exam and review of systems on all patients upon admission to the hospital, even if their symptoms seem to be only psychiatric in nature.

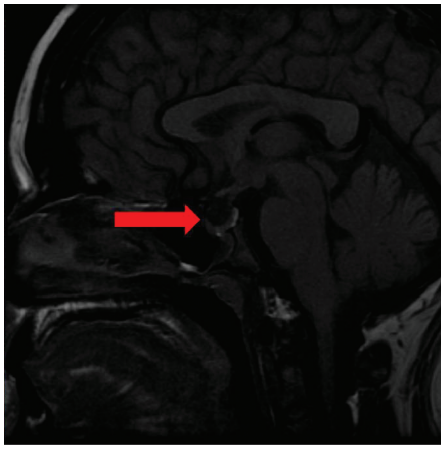

FIGURE 1. MRI showing a partially empty sella

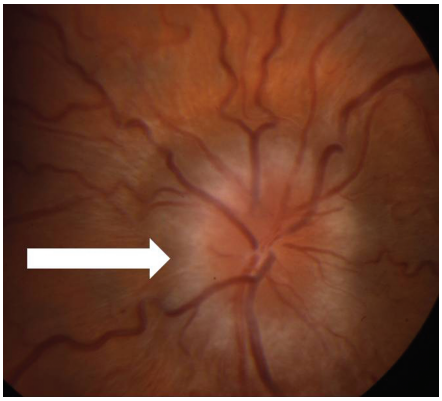

FIGURE 2. Papillary edema and bulging optic disc due to increased intracranial pressure

Although acetazolamide has been the standard of care for medical treatment of pseudotumor cerebri, there has been some evidence that topiramate can assist in resolving the associated headache and can reduce cerebral spinal fluid pressure.[5] In addition, there is the common side effect of weight loss, which would be advantageous in this case as well. Furthermore, topiramate has shown promise as an adjunct therapy in the treatment of PTSD.[6] Therefore, the neurology team elected to employ acetazolamide and topiramate in combination in this patient. This patient displayed a good initial response to treatment.

PTSD is an anxiety disorder, as classified by the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision,* characterized by a patient's reexperiencing of an extremely traumatic, often life-threatening event and is associated with symptoms of hyperarousal and avoidance of stimuli that remind the patient of the event.[7] Insomnia and nightmares are early complaints of PTSD sufferers that can lead to fatigue and irritability during the day.[8] Furthermore, continued sleep disturbance may interfere with healthy emotional adaptation and contribute to the perpetuation of PTSD symptoms.[8] Hyperarousal, ensuing insomnia, and daytime irritability can mimic hypomania, and, in the absence of a complete patient history, a diagnosis of bipolar II disorder might be mistakenly made. Even in light of increased media coverage of PTSD and national awareness campaigns,[9] data indicate that physician diagnosis of PTSD remains low relative to its prevalence.[10]

Despite our patient's significant traumatic history during childhood and physical trauma in adulthood that led to disability, as well as meeting criteria for borderline personality disorder, a PTSD diagnosis had not been investigated during any of her previous admissions. Borderline personality disorder did partially explain the patient's psychiatric symptoms, particularly her practice of self mutilation, but it did not account for all of her symptoms, which is presumably how the additional diagnosis of bipolar II disorder was made. It is likely that PTSD had been masquerading as bipolar II disorder in this patient for the past two years. We felt that the diagnosis of bipolar II was not appropriate and that the patient's psychiatric symptoms were better explained by PTSD, particularly hypervigilance and her thrill-seeking behavior, which could be attributed to a counterphobic defense mechanism. The majority of her "hypomanic" symptoms appeared to have been secondary to sleep deprivation resulting from hypervigilance and nightmares associated with PTSD. Incorrect diagnosis prevented the timely and appropriate treatment of this patient. It additionally explains why she had been refractory to all standard treatment approaches for bipolar disorder and had therefore required repeated hospitalization for the management of her acute psychiatric symptoms.

Mental health professionals often use the Mood Disorder Questionnaire (MDQ) to identify symptoms of mania in patients. As was evidenced by this case, use of a PTSD screening tool, such as the PCL-C or PCL-M (military version),[1] should also be considered if there is suggestion of a traumatic history, as there can be an overlap of symptoms, thus improving chances of an appropriate diagnosis and treatment.

The patient was started on prazosin titrated to 10mg for nightmares and other symptoms associated with PTSD and a brief course of clonazepam 2mg to help her sleep.[11,12] Initial focus on quality of sleep is an important aspect of therapy to consider when treating PTSD patients. It has been suggested that lack of sleep in PTSD patients has a negative impact on their symptom severity.[13] Our patient was also scheduled to continue seeing her therapist on an outpatient basis as a part of her long-term treatment plan. As we felt that bipolar II disorder was a misdiagnosis, ziprasidone was discontinued.

FOLLOW UP

Five months following discharge, the patient reported 4 to 5 weeks of headache relief after which the headaches began to recur. She had not been successful in losing weight, largely due to diet nonadherence. She noted a significant improvement in quality of sleep with less frequent nightmares, but still complained of multiple awakenings during the night. A sleep study was conducted that revealed no primary sleep disorder but did reveal poor sleep hygiene and poor overall sleep, which was thought to be due to persistent back pain and PTSD. She continued to see the therapist and psychiatrist for management of her PTSD symptoms. The patient

reported some mood fluctuations and intermittent suicidal ideation, although she did not reach crisis nor require hospitalization in the five months since her discharge. With the help of her therapist, she was learning to deal with the past trauma that possibly explained the fluctuation in mood. She also continued to see the neurologist and ophthalmologist on an outpatient basis. The ophthalmology teams noted reassuring spontaneous pulsation on fundic exam after several months of treatment with acetazolamide and topiramate.[14] Neurology was considering shunt placement due to persistent headaches and difficultly stabilizing cerebrospinal pressure that required several additional lumbar punctures since her discharge.[15]

CONCLUSION

As an overlap of symptoms exists among psychiatric disorders, we recommend careful selection of the many screening tools available, such as the MDQ and PCL-C or PCL-M, as were used in this case to aid in reaching the most accurate diagnosis possible and thus establish appropriate treatment for patients. Additionally, careful physical exam should be performed in all instances to help investigate organic causes of psychiatric manifestations.

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